ABSTRACT

A method is disclosed for finding a deformed pattern in an image using a plurality of sub-patterns. By advantageously restricting sub-pattern search ranges, search speed is improved, and the incidence of spurious matches is reduced. The method also quickly decides which sub-pattern result, of several potential candidates, is most likely to be the correct match for a deformed sub-pattern. Also, a method is provided for characterizing a deformed pattern in an image by using results from feature-based search tools to create a mapping that models the deformation of the pattern. A transform, selectable by a user, is fit to the results from the search tools to create a global deformation mapping. This transformation is fit only to feature points derived from matches resulting from successful sub-pattern search, without including data from areas of the pattern that were blank, not matched, or otherwise didn't contain information about the pattern's distorted location.